

Секция №4. Международное сотрудничество в сфере медицинского образования

The organization of the educational process in anatomy: a brief review of international english literature

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Modern problems of the anatomy, as a discipline. In recent years, anatomy has faced enormous challenges with the emergence of a host of specialized and interdisciplinary research foci ranging from neuroscience to reproductive biology and genetics. The result has been fragmentation of the once monolithic anatomy empire, and a diminution in its stature as a vigorous contributor to academic debate [10, 12]; anatomists will have to appreciate that their discipline is as thoroughly research-driven as any comparable biomedical discipline and that this is where its future lies. Multidisciplinary research teams including anatomists work with small businesses to develop new devices and drugs [19]. Many Anatomy departments now teach into a wide range of courses both in science and health sciences as well as the arts. Some departments have significant research activities and many also engage in public outreach; the history of some of these departments will be explored and the characteristics of successful units analyzed. This information will be discussed to see what lessons can be learnt to help develop anatomy into a strong and relevant discipline for the 21st and subsequent centuries [18].

Anatomical Terminology. The International Federation of Associations of Anatomists (IFAA), which was founded in 1903, is an umbrella scientific organization of national and multinational Anatomy Associations, dedicated to anatomy and biomorphological sciences. The Fifth Congress of IFAA (Oxford, 1950) established a committee, the International Anatomical Nomenclature Committee (IANC); *Nomina Anatomica (NA)* was the international standard on human anatomic terminology from 1955 until it was replaced by *Terminologia Anatomica (TA)* in 1998. Around the time of the Twelfth Congress (London, 1985), a dispute arose over the editorial independence of the IANC. The IANC did not believe that their work should be subject to the approval of IFAA Member Associations. Instead, at the Thirteenth Congress (Rio de Janeiro, 1989), the IFAA created a new committee – the Federative Committee on Anatomical Terminology (FCAT) (further FICAT—the Federative International Committee on Anatomical Terminology, at present – FIPAT - the Federative International Programme for Anatomical Terminology). FIPAT, encompasses the official international standard set of human anatomical terminologies. FIPAT systematizes and organizes anatomical terminology through several Sections: Anatomy [*Terminologia Anatomica (TA)*], Histology [*Terminologia Histologica (TH)*], Embryology [*Terminologia Embryologica (TE)*],

Neuroanatomy [Terminologia Neuroanatomica (TNA)], Anthropology [*Terminologia Anthropologica* (TAnth)], Odontology [Terminologia Odontologica (TO)], Oral anatomy [Terminologia Orobiologica (TOroanat)]. In recent times there has been considerable emphasis on Informatics, currently operating mainly in the area covered by Terminologia Anatomica. There is also a Latin Subcommittee. Up to now FIPAT publications and those of its predecessor were in book form, with the consequent constraints on circulation, flexibility and speed of responsiveness to new developments. *Terminologia Anatomica* (TA), *Terminologia Histologica* (TH) and *Terminologia Embryologica* (TE) have been published in this format, in 1998, 2008 and 2013, respectively. But NA and its derivatives are still used in some contexts (even the controversial sixth edition - the title of the sixth edition includes the phrase "authorised by the Twelfth International Congress of Anatomists in London, 1985", but this authorization is disputed.), and there remain some obstacles to universal adoption of TA [2, 8, 14, 17, 24].

Textbooks of human anatomy. In any anatomical text or atlas, terminology is always an interesting issue. In the interest of uniformity it should be used The Terminologia Anatomica. Other terminology is not incorrect, but using terminology from this single, internationally recognized source would be the most logical and straightforward approach [7].

Nowadays, two types of books are of real use in anatomy. Encyclopedic works of immense extend and student-friendly textbooks. Many curricula around the world are being presented in a more integrated format combining anatomy, physiology, histology, and embryology. There are many outstanding textbooks of human Anatomy covering these subject areas, and that trying to cover everything in a single book would produce a text of questionable quality and usefulness, not to mention enormous size [7]. Memorix of Anatomy is a perfect representative of the second group with a modern design and didactic approach. Book written by medical students, anatomists and medical doctors summarizes information from general, special and topographic anatomy [13].

The teaching methods of anatomy. Nowadays, when you are dealing with digital native students, it is very difficult teaching and to be a teacher in general, especially such a difficult discipline, as the anatomy. In Anatomy Pedagogy it is imperative that educators understand the: who, what, why, where and when of learning anatomy. Before we meet and begin teaching as educators we must appreciate the different psychometrics that students 'Who' bring to learning. These include: previous experience, personality, attitude, learning style and spatial ability. Once students have left the teaching room doors they venture into their next stage 'Why' applying knowledge. Whilst the contents 'What' students need to learn have been defined the 'Where' and the 'When' students should learn is a changing dynamic as the boundaries between formal and informal learning are blending [23].

The cadaver is still important in the education - *Mors auxilium vitae* – death helps the life; eg the South Africa Health Professions Council requires cadaver dissection for registration of medical doctors [15]. What do medical students think about dissection? Most students felt that dissection had been a positive experience

and a useful learning tool [16]. To alleviate student anxieties/fears around their first dissection experience, an informative lecture on aspects of death and death rituals in different cultures will be introduced, followed by structured, informal dissection group discussions [15]. As a way of honoring body donors must be hold an annual memorial service that their family and friends are invited to attend.

Despite the importance of its usage in medical education, cadaveric donation remains unsatisfactory worldwide. Increasing number of medical schools and students exacerbate the need for more cadavers. Some countries try to solve the dearth of cadaver by importing from other countries but this may cause serious ethical problems [22]. In order to dissect legally and ethically firm, we have to clarify, who owns that cadaver. Having defined this issue, we can proceed to the question, when and why anatomists are allowed to perform a dissection and avoid serious allegations of violation. The question of ownership has two possible, but contradictory answers. The first answer is based on the assumption that the cadaver is a mere thing, an item. With this, a cadaver may be inherited or even traded like any other good. It is obvious that this resolution to our problem is false. Almost all, if not really all societies deny that a cadaver – or parts of it – are a tradable good and consequently interdict trading of cadavers or parts of it. The second answer is based on the assumption that the cadaver is – still – part of the immaterial personal rights of the once living person. This means that the person itself – and nobody else – has the right to decide on the cadaver's future, of course within the framework of legal and ethical rules [4]. Anatomists are not alone in their interest in cadavers, even if on occasion they have acted as though they had privileged access to them [11].

Yet, not all Universities use dissection to teach human gross anatomy. Many countries have well-established donation programs and use more or less or not at all body dissection to teach human gross anatomy. There are those countries that have no donation programs, and use unclaimed bodies only or perhaps a few donated bodies. In several countries a use of cadavers for dissection is unthinkable for cultural or religious reasons [21].

Within the African continent, with 54 countries, there are several challenges as you interact with an anatomy department. In most countries a formal body donor or bequest programme does not exist except in South Africa. Unclaimed bodies are received by Anatomy departments by an act of Ministries of Health which provide the legal framework that predominate the acquisition and dissection of human cadavers. Lack of cadavers is influenced by religious beliefs especially in some Medical schools located in predominantly Moslem environment. This is true from West Africa to East Africa (Uganda, Kenya) [9].

The use of human cadavers in America for education and biomedical research is critical for the success of these activities and has been common practice for more than half a century. In fact, at some institutions Body Donation Programs date back to the early 20th Century. All programs must comply with the Uniform Anatomical Gift Act, prohibiting the sale or purchase of human body parts, follow all national, state and local laws, and meet high standards related to the integrity and security of the bodies donated [6].

In 2013, Chinese Society for Anatomical Sciences undertook an investigation about body donation program. 41 universities responded for the investigation. It shows that cadavers are increasingly used for medical education in China. There is a serious shortage of dissecting cadavers in Chinese universities. Among 41 investigated universities, 8 stopped teaching of regional anatomy (19.5%). In 13 (31.7%), 10 or less students shares one cadaver, while one in Beijing, 4 students dissect one; in 14 (34.1%), 20 or less students shares one cadaver; in 4 (9.8%), 30 or less students shares one. In one university (2.4%), 60 students dissect one cadaver. Donation programs are under instructions of Chinese Red Cross. There are 29 medical universities (70.7%) have practiced body donated programs. In 8 (19.5%), donated body is the only resource for dissection. In 21 (51.2%), both donated and unclaimed bodies are used for dissection. In 12, which have no donation program, unclaimed body is the only resource for teaching [25].

If a country/state/school/department is attempting to initiate a successful Body Donation Program the following steps should be followed: 1) Gain support from religious and political/community leaders; 2) Work with legal counsel to fully understand existing national/local laws governing the use of cadavers and body donation; 3) Identify a prominent person in the medical field to publically discuss the value of body donation; and 4) Prepare tasteful written materials and design a professional promotional campaign [6].

Anatomy education has undergone significant changes over recent decades. They include the introduction of an integrated curriculum (Problem-Based Learning) and new types of teaching methods (computer-aided instruction, less dissection and, using medical imaging) [3].

While some aspects of traditional anatomy education remain, educational programs designed to help all learners, visual, auditory and kinesthetic, are the focus of course and curricular designers [5]. To highlight surface anatomy, full body digital X-rays of each cadaver dissected by students are used in conjunction with palpation and drawing activities [15]. Over the last decades, medical imaging and diagnostic techniques have seen a tremendous progress and increase in complexity and allow an identification and analysis of organs, anatomical structures and their pathological changes without autopsy nor dissection. Such technical advance imposes an adaptation of the preclinical anatomy teaching in addition to traditional dissection with CT and IRM scans on computer terminals placed next to the cadaver. It is also important to prepare elearning modules to be used any time during the day as a supplement to regular dissection courses [20].

In the era of social media, it is now possible to be at where your students are and provide education anywhere, anytime. The tools used in anatomy education were as follows: 1) Wordpress Blog, 2) Whatsapp group, 3) E-Lab Blog, 4) On- line video lectures, 5) Twitter class, 6) YouTube videos and 7) online games in the blog, 8) Lab demonstration videos, 9) Vine Lab, 10) Mp3 lectures; lecturing each sentence in the class notes, 11) Answers to questions at Whatsapp moved to a blog as mp3 files, 12) Skype classes [26]. During the first two years of the medical program at the University of Queensland, ten 2-hour radiological anatomy tutorials have been

introduced to supplement the existing gross anatomy practical sessions. Two radiologists present introductory material and then students follow tutorial notes to access recommended web sites, which includes Diagnostic Imaging Pathways (Western Australia Department of Health) that have an excellent selection of normal anatomical images. After completion of a defined section of learning, students complete online test modules developed by the eTec company Smart Sparrow for the BEST Network – a network of Australian universities that develop and share online medical teaching resources [1].

Federative International Committee for Ethics and Medical Humanities (FICEM) of IFAA intends to be a think-tank and adviser for all ethical questions related to anatomical research, anatomical teaching, and anatomical collections and displays. The IFAA is in the process for developing core syllabuses for teaching anatomy in medicine and allied health programs (Federative International Program for Anatomical Education - FIPAE)

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Процесс пошел...

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*Вопрос об образовании есть для современных
обществ вопрос жизни и смерти, вопрос,
от которого зависит их будущее
Э. Ренан*

Интеграционные процессы охватили сферу высшего образования в 1957 году после создания Европейского экономического сообщества (Римский договор). Через год была подписана конвенция об академическом признании университетских квалификаций, открывавшая возможность для их обладателя